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PROBLEM OF CANCER CONSIDERED AT TENTH SESSION OF THE
ACADEMY OF SCIENCES USSR

[Comment: This article by N. Blokhin, director of the Institute of Pathology and Therapy of Cancer and Corresponding Member of the Academy of Medical Sciences USSR, was published under the title "The Most Important Problem of Medicine" in Vechernyaya Moskva, No 69, 21 March 1956.]

The tenth session of the General Assembly of the Academy of Medical Sciences USSR is being held in Moscow. The fight against cancer is the main question on the agenda of the session.

The problem of cancer therapy is one of the most important of those confronting medical science and public health protection. To this date, neoplasms are the cause of the death of many people.

The scientists of the world have for many years striven to understand the nature of neoplasms, and have sought effective means with which it would be possible to prevent and cure this serious disease.

Indisputable successes in the organization of the fight against cancer, and in the prophylaxis and treatment of neoplasms, have been achieved in the USSR. We cannot, however, be satisfied with these achievements.

The problem of cancer is now before the session of the Academy of Medical Sciences. We hope that a wide discussion of the data which have been accumulated by the scientists will contribute to the development of research in this field, and will make possible the solution of some of the important problems.

Several phases of the problem are being investigated. The question of the causes and of the nature of neoplasms, and statistical data on the incidence of the disease in various areas, and the regional peculiarities which govern the distribution of the disease are being studied. Considerable attention is being paid to the question of prophylaxis against cancer, and to the search for effective methods for its early diagnosis. New methods of cancer therapy are being developed, and the existing methods are being improved.

All these problems are closely interconnected.

For instance, studies of statistical data on cancer, and an understanding of the factors which govern its distribution in various countries under various climatic conditions, with consideration of the peculiarities of living conditions, diet, and so forth, are undoubtedly of importance not only for an understanding of the disease, but also for the development of methods of prophylaxis of cancer.

In an attempt to answer the question as to what are the causes of cancer and what are the reasons for its development, scientists have gathered a large number of facts. But no final answer to the question has as yet been found. Specific harmful agents, termed cancerogenic, are now known to science. Certain chemical substances as well as certain types of radiation are among them. Experiments conducted on animals have established the fact that the prolonged action of these upon the organism causes the formation of neoplasms. It has also been proven that some neoplasms in the animals are caused by specific viruses, i.e., minute microorganisms which can be observed only with the aid of an electron microscope.

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New data presented by the supporters of the virus theory of neoplasms (Professors L. A. Zil'ber and A. D. Tilofeyevskiy), as well as data presented by supporters of the more widely held point of view about the multiplicity of the causes of neoplasms (Professors N. N. Petrov and L. M. Shabad) are being discussed at the session. The latter group of scientists assumes that the causes of cancer are diverse. Several reports are devoted to such questions as the biological nature of cancer, the biochemical changes which take place in the organism of the person afflicted with cancer, and the role of the nervous system in the development of the disease (Prof I. V. Davydovskiy, Academician V. A. Engel'gardt, Professors A. A. Solovyev and S. I. Lebedinskiy).

No adequate statistical study of cancer has been conducted in our country until recent times. A thorough study of the peculiarities of the distribution of the various forms of cancer over the large territory of the USSR will, probably, provide new and interesting information. A report on this question was read by A. V. Chaklin, Candidate of Medical Sciences.

Prophylactic measures, particularly the prophylactic examination of the population on a mass scale, have been widely applied in the USSR for a long time. It is known that cancer, as a rule, does not develop in perfectly healthy tissue, and that the development of cancer is usually preceded by various pathological conditions, conventionally designated as preneoplastic processes. It is, therefore, highly important to determine the existence of these processes, and to begin their prompt treatment. Prophylactic examination of large segments of our population has already produced positive results: the number of neglected neoplasms, which are difficult to cure, has been reduced. Prof N. N. Petrov, who is the oldest oncologist in our country, has been the initiator of these prophylactic measures. He read a report on the causes and nature of cancer at the session.

A report by Prof A. I. Savitskiy was devoted to the organization of cancer control in our country. These questions were widely discussed at the plenary session of the All-Union Scientific Society of Oncologists which preceded the session of the Academy of Medical Sciences.

New methods of the therapy of neoplasms will be discussed by the scientists with great interest. It must be said that many forms of cancer are now being successfully treated by surgery and by the application of roentgen rays and radium irradiation, as well as by a combination of these methods. The possibility of treating some forms of cancer with radioactive isotopes and with drugs has been given ever wider study in the past years. Some forms of this disease, however, are still difficult to treat, especially in the later stages of their development.

The report on the modern methods of the therapy of neoplasms which will be presented by Professors A. I. Serebrov and L. M. Goldshteyn will, undoubtedly, evoke a considerable reaction. In speaking of new methods of therapy, the drugs and antibiotics which have antineoplasm activity should not be overlooked. Papers by Professors L. F. Larionov, M. M. Mayevskiy, and N. N. Blokhin are devoted to this question.

In the course of our work on problems of the treatment of neoplasms with drugs, we arrived at the conclusion that it is not possible to develop a universal anticancer drug which will be effective in the treatment of all forms of this disease. However, even drugs which prove to be effective in the therapy of some types of neoplasms are of great interest and merit thorough study.

We shall provide the session with data on the new drugs: sarcocollin and dopan, which are being studied at our institute, and are now being successfully used in the treatment of some neoplasms.

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Other problems such as those pertaining to the immunology of neoplasms (reports by Professors N. N. Zhukov-Verezhuikov, P. N. Kosyakov, I. N. May-skiy, and others), the metastasis of neoplasms (reports by Professors D. A. Zhdanov and B. V. Ognev), etc., are also of considerable importance.

We hope that the thorough discussion of the problem of cancer at the session of the Academy of Medical Sciences will contribute to the final solution of this problem in the course of the Sixth Five-Year Plan. It is necessary that following the discussions some organizational measures which will help the oncological institutions to place their studies on a modern scientific plane be adopted. It is necessary to eliminate the shortcomings in the matter of equipping and supplying these institutions, which are working on one of the most important problems of medical science.

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